

IN THE DRAWINGS

The attached sheets of drawings include changes to Fig. 1-7. These sheets, which include Figs. 1-7, replace the original sheets including Figs. 1-7.

Attachment: Replacement Sheets

REMARKS/ARGUMENTS

Favorable reconsideration of this application as currently amended and in view of the following remarks is respectfully requested.

Claims 11 and 13-20 are currently active in this case. Claims 11 and 13 have been amended and claim 12 has been cancelled by the current amendment. No new matter has been added.

In the outstanding office action, the abstract was objected to; claims 11-13 were rejected under 35 USC 102(b) as being anticipated by U.S. patent No. 5,184,673 to Hedman et al.; claims 18-20 were rejected under 35 USC 103(a) as being unpatentable over Hedman et al.; and claims 14-17 were rejected under 35 USC 103(a) as being unpatentable over Hedman et al. in view of U.S. patent No. 3,532,161 to Loebel.

Applicants traverse the objection to the abstract. Applicants respectfully submit that the abstract presented in the April 25, 2005 preliminary amendment conforms with the guidelines provided in MPEP §608.01(b). Consequently, no further objection to the abstract is anticipated.

Briefly recapitulating, the present invention (Amended Claim 11) is directed to a heat exchanger including plates which are brazed to each other (i.e. there is no space or elements between the plates) and which have a pattern of groves and connections. A separation zone is provided between inner and outer brazing arranged around connections. A set of holes is arranged through the plates in the separation zone. See page 4, lines 17-29, and figures 3 and 4 of the Specification. With respect to the connections and by way of non-limiting example, the inner brazings are elements 12 and 13, and the outer brazings are elements 12 and 14, where the brazings 12 are closest to the holes 20.

As a consequence of this configuration, a reinforcement mechanism may be placed closed to the connections where the stresses are high on the plates. Due to the separation

zone, the holes may be arranged directly through the plates without any leakage. No spacers or other reinforcements are needed around the connections, and the plates may be brazed directly against each other.

In contrast thereto Hedman et al. disclose a heat exchanger which is reinforced by means of tubes 13, 14 running through holes at a distance from the connections. See Figure 3. Spacer washers and distance pieces are joined to one another in such a way that a solid body is formed around the connections. Channels 9 for the tubes 13 and 14 are made through the solid body. See Figure 1. This solid body cooler is unnecessary in the present invention because of the configuration recited in claim 11 including the separation zone.

Loebel does not address the deficiencies of Hedman et al. Loebel merely discloses a plate type heat exchanger with the plates secured in place by use of rods. However, the plates are bolted together with appropriately positioned gaskets or sealing strips. This is not a brazed heat exchanger, in which the plates are firmly brazed to each other. Thus, the rods are distributed at the edges of the heat exchanger to keep the plates together and to relieve the plates from stresses. In a brazed heat exchanger, the stresses are the largest at the connections, necessitating a reinforcement to accommodate the high forces. Applicants note that a brazed heat exchanger can withstand much higher pressures than a heat exchanger with gaskets.

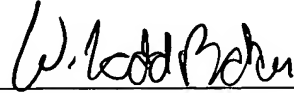
In view of the foregoing, Hedman et al. are not believed to anticipate or render obvious the subject matter defined by claim 11 when considered alone or in combination with Loebel. Dependent claims 13-20 are believed to be allowable for at least the same reasons that claim 11 is believed to be allowable.

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An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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